

SUBCHAPTER K—ADVANCED TECHNOLOGY PROGRAM PROCEDURES

PART 290—REGIONAL CENTERS FOR THE TRANSFER OF MANUFACTURING TECHNOLOGY

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§ 290.1 Purpose.

This rule provides policy for a program to establish Regional Centers for the Transfer of Manufacturing Technology as well as the prescribed policies and procedures to insure the fair, equitable and uniform treatment of proposals for assistance. In addition, the rule provides general guidelines for the management of the program by the National Institute of Standards and Technology, as well as criteria for the evaluation of the Centers, throughout the lifecycle of financial assistance to the Centers by the National Institute of Standards and Technology.

§ 290.2 Definitions.

(a) The phrase *advanced manufacturing technology* refers to new technologies which have recently been developed, or are currently under development, for use in product or part design, fabrication, assembly, quality control, or improving production efficiency.

(b) The term *Center* or *Regional Center* means a NIST-established Regional Center for the Transfer of Manufacturing Technology described under these procedures.

(c) The term *operating award* means a cooperative agreement which provides funding and technical assistance to a

Center for purposes set forth in §290.3 of these procedures.

(d) The term *Director* means the Director of the National Institute of Standards and Technology.

(e) The term *NIST* means the National Institute of Standards and Technology, U.S. Department of Commerce.

(f) The term *Program* or *Centers Program* means the NIST program for establishment of, support for, and cooperative interaction with Regional Centers for the Transfer of Manufacturing Technology.

(g) The term *qualified proposal* means a proposal submitted by a nonprofit organization which meets the basic requirements set forth in §290.5 of these procedures.

(h) The term *Secretary* means the Secretary of Commerce.

(i) The term *target firm* means those firms best able to absorb advanced manufacturing technologies and techniques, especially those developed at NIST, and which are already well prepared in an operational, management and financial sense to improve the levels of technology they employ.

§ 290.3 Program description.

(a) The Secretary, acting through the Director, shall provide technical and financial assistance for the creation and support of Regional Centers for the Transfer of Manufacturing Technology. Each Center shall be affiliated with a U.S.-based nonprofit institution or organization which has submitted a qualified proposal for a Center Operating Award under these procedures. Support may be provided for a period not to exceed six years. The Centers work with industry, universities, nonprofit economic development organizations and state governments to transfer advanced manufacturing technologies, processes, and methods as defined in §290.2 to small and medium sized firms. These technology transfer efforts focus on the continuous and incremental improvement of the target firms. The advanced manufacturing technology which is the focus of the

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Centers is the subject of research in NIST's Automated Manufacturing Research Facility (AMRF). The core of AMRF research has principally been applied in discrete part manufacturing, including electronics, composites, plastics, and metal parts fabrication and assembly. Centers will be afforded the opportunity for interaction with the AMRF and will be given access to research projects and results to strengthen their technology transfer. Where elements of a solution are available from an existing source, they should be employed. Where private-sector consultants who can meet the needs of a small- or medium-sized manufacturer are available, they should handle the task. Each Center should bring to bear the technology expertise described in §290.3(d) to assist small- and medium-sized manufacturing firms in adopting advanced manufacturing technology.

(b) *Program objective.* The objective of the NIST Manufacturing Technology Centers is to enhance productivity and technological performance in United States manufacturing. This will be accomplished through:

(1) The transfer of manufacturing technology and techniques developed at NIST to Centers and, through them, to manufacturing companies throughout the United States;

(2) The participation of individuals from industry, universities, State governments, other Federal agencies, and, when appropriate, NIST in cooperative technology transfer activities;

(3) Efforts to make new manufacturing technology and processes usable by United States-based small- and medium-sized companies;

(4) The active dissemination of scientific, engineering, technical, and management information about manufacturing to industrial firms, including small- and medium-sized manufacturing companies; and

(5) The utilization, when appropriate, of the expertise and capability that exists in Federal laboratories other than NIST.

(c) *Center activities.* The activities of the Centers shall include:

(1) The establishment of automated manufacturing systems and other advanced production technologies based

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on research by NIST and other Federal laboratories for the purpose of demonstrations and technology transfer;

(2) The active transfer and dissemination of research findings and Center expertise to a wide range of companies and enterprises, particularly small- and medium-sized manufacturers; and

(3) Loans, on a selective, short-term basis, of items of advanced manufacturing equipment to small manufacturing firms with less than 100 employees.

(d) *Center organization and operation.* Each Center will be organized to transfer advanced manufacturing technology to small and medium sized manufacturers located in its service region. Regional Centers will be established and operated via cooperative agreements between NIST and the award-receiving organizations. Individual awards shall be decided on the basis of merit review, geographical diversity, and the availability of funding.

(e) *Leverage.* The Centers program must concentrate on approaches which can be applied to other companies, in other regions, or by other organizations. The lessons learned in assisting a particular target firm should be documented in order to facilitate the use of those lessons by other target firms. A Center should build on unique solutions developed for a single company to develop techniques of broad applicability. It should seek wide implementation with well-developed mechanisms for distribution of results. Leverage is the principle of developing less resource-intensive methods of delivering technologies (as when a Center staff person has the same impact on ten firms as was formerly obtained with the resources used for one, or when a project once done by the Center can be carried out for dozens of companies by the private sector or a state or local organization.) Leverage does not imply a larger non-federal funding match (that is, greater expenditure of non-federal dollars for each federal dollar) but rather a greater impact per dollar.

(f) *Regional impact.* A new Center should not begin by spreading its resources too thinly over too large a geographic area. It should concentrate

first on establishing its structure, operating style, and client base within a manageable service area.

§ 290.4 Terms and schedule of financial assistance.

(a) NIST may provide financial support to any Center for a period not to exceed six years, subject to the availability of funding and continued satisfactory performance. Awards under this program shall be subject to all Federal and Departmental regulations, policies, and procedures applicable to Federal assistance awards. NIST may not provide more than 50 percent of the capital and annual operating and maintenance required to create and maintain such Center. Allowable capital costs may be treated as an expense in the year expended or obligated.

(b) *NIST contribution.* The funds provided by NIST may be used for capital and operating and maintenance expenses. Each Center will operate on one-year, annually renewable cooperative agreements, contingent upon successful completion of informal annual reviews. Funding can not be provided after the sixth year of support. A formal review of each Center will be conducted during its third year of operation by an independent Merit Review Panel in accordance with § 290.8 of these procedures. Centers will be required to demonstrate that they will be self-sufficient by the end of six years of operation. The amount of NIST investment in each Center will depend upon the particular requirements, plans, and performance of the Center, as well as the availability of NIST funds. NIST may support the budget of each Center on a matching-funds basis not to exceed the Schedule of Financial Assistance outlined in Table 1. The remaining portion of the Center's funding shall be provided by the host organization.

TABLE 1—SCHEDULE OF NIST MATCHING FUNDS

Year of center operation	Maximum NIST share
1-3	1/2
4	2/5
5-6	1/3

(c) *Host contribution.* The host organization may count as part of its share:

(1) Dollar contributions from state, county, city, industrial, or other sources;

(2) Revenue from licensing and royalties;

(3) Fees for services performed,

(4) In-kind contributions of full-time personnel,

(5) In-kind contribution of part-time personnel, equipment, software, rental value of centrally located space (office and laboratory) and other related contributions up to a maximum of one-half of the host's annual share. Allowable capital expenditures may be applied in the award year expended or in subsequent award years.

[55 FR 38275, Sept. 17, 1990, as amended at 59 FR 22505, May 2, 1994]

§ 290.5 Basic proposal qualifications.

(a) NIST shall designate each proposal which satisfies the qualifications criteria below as "qualified proposal" and subject the qualified proposals to a merit review. Applications which do not meet the requirements of this section will not receive further consideration.

(1) *Qualified organizations.* Any non-profit institution, or group thereof, or consortium of nonprofit institutions, including entities which already exist or may be incorporated specifically to manage the Center.

(2) *Proposal format.* Proposals for Center Operating Awards shall:

(i) Be submitted with a Standard Form 424 to the above address;

(ii) *Not exceed 25 typewritten pages in length for the basic proposal document* (which must include the information requirements of paragraph (a)(3) of this section); it may be accompanied by additional appendices of relevant supplementary attachments and tabular material. Basic proposal documents which exceed 25 pages in length will not be qualified for further review.

(3) *Proposal requirements.* In order to be considered for a Center Operating Award, proposals must contain:

(i) A plan for the allocation of intellectual property rights associated with any invention or copyright which may result from the involvement in the

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Center's technology transfer or research activities consistent with the conditions of § 290.9;

(ii) A statement which provides adequate assurances that the host organization will contribute 50 percent or more of the proposed Center's capital and annual operating and maintenance costs for the first three years and an increasing share for each of the following three additional years. Applicants should provide evidence that the proposed Center will be self-supporting after six years.

(iii) A statement describing linkages to industry, government, and educational organizations within its service region.

(iv) A statement defining the initial service region including a statement of the constituency to be served and the level of service to be provided, as well as outyear plans.

(v) A statement agreeing to focus the mission of the Center on technology transfer activities and not to exclude companies based on state boundaries.

(vi) A proposed plan for the annual evaluation of the success of the Center by the Program, including appropriate criteria for consideration, and weighting of those criteria.

(vii) A plan to focus the Center's technology emphasis on areas consistent with NIST technology research programs and organizational expertise.

(viii) A description of the planned Center sufficient to permit NIST to evaluate the proposal in accordance with § 290.6 of these procedures.

(b) [Reserved]

§ 290.6 Proposal evaluation and selection criteria.

(a) In making a decision whether to provide financial support, NIST shall review and evaluate all qualified proposals in accordance with the following criteria, assigning equal weight to each of the four categories.

(i) *Identification of target firms in proposed region.* Does the proposal define an appropriate service region with a large enough population of target firms of small- and medium-sized manufacturers which the applicant understands and can serve, and which is not presently served by an existing Center?

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(i) *Market analysis.* Demonstrated understanding of the service region's manufacturing base, including business size, industry types, product mix, and technology requirements.

(ii) *Geographical location.* Physical size, concentration of industry, and economic significance of the service region's manufacturing base. Geographical diversity of Centers will be a factor in evaluation of proposals; a proposal for a Center located near an existing Center may be considered only if the proposal is unusually strong and the population of manufacturers and the technology to be addressed justify it.

(2) *Technology resources.* Does the proposal assure strength in technical personnel and programmatic resources, full-time staff, facilities, equipment, and linkages to external sources of technology to develop and transfer technologies related to NIST research results and expertise in the technical areas noted in these procedures?

(3) *Technology delivery mechanisms.* Does the proposal clearly and sharply define an effective methodology for delivering advanced manufacturing technology to small- and medium-sized manufacturers?

(i) *Linkages.* Development of effective partnerships or linkages to third parties such as industry, universities, non-profit economic organizations, and state governments who will amplify the Center's technology delivery to reach a large number of clients in its service region.

(ii) *Program leverage.* Provision of an effective strategy to amplify the Center's technology delivery approaches to achieve the proposed objectives as described in § 290.3(e).

(4) *Management and financial plan.* Does the proposal define a management structure and assure management personnel to carry out development and operation of an effective Center?

(i) *Organizational structure.* Completeness and appropriateness of the organizational structure, and its focus on the mission of the Center. Assurance of full-time top management of the Center.

(ii) *Program management.* Effectiveness of the planned methodology of program management.

(iii) *Internal evaluation.* Effectiveness of the planned continuous internal evaluation of program activities.

(iv) *Plans for financial matching.* Demonstrated stability and duration of the applicant's funding commitments as well as the percentage of operating and capital costs guaranteed by the applicant. Identification of matching fund sources and the general terms of the funding commitments. Evidence of the applicant's ability to become self-sustaining in six years.

(v) *Budget.* Suitability and focus of the applicant's detailed one-year budget and six-year budget outline.

§ 290.7 Proposal selection process.

Upon the availability of funding to establish Regional Centers, the Director shall publish a notice in the FEDERAL REGISTER requesting submission of proposals from interested organizations. Applicants will be given an established time frame, not less than 60 days from the publication date of the notice, to prepare and submit a proposal. The proposal evaluation and selection process will consist of four principal phases: Proposal qualification; Proposal review and selection of finalists; Finalist site visits; and, Award determination. Further descriptions of these phases are provided in the following:

(a) *Proposal qualification.* All proposals will be reviewed by NIST to assure compliance with § 290.5 of these procedures. Proposals which satisfy these requirements will be designated qualified proposals; all others will be disqualified at this phase of the evaluation and selection process.

(b) *Proposal review and selection of finalists.* The Director of NIST will appoint an evaluation panel to review and evaluate all qualified proposals in accordance with the criteria set forth in section 290.6 of these procedures, assigning equal weight to each of the four categories. From the qualified proposals, a group of finalists will be selected based on this review.

(c) *Finalist site visits.* NIST representatives will visit each finalist organization. Finalists will be reviewed and assigned numeric scores using the criteria set forth in § 290.6 of these procedures assigning equal weight to each of

the four categories. NIST may enter into negotiations with the finalists concerning any aspect of their proposal.

(d) *Award determination.* The Director of NIST or his designee shall select awardees for Center Operating Awards based upon the rank order of applicants, the need to assure appropriate regional distribution, and the availability of funds. Upon the final award decision, a notification will be made to each of the proposing organizations.

§ 290.8 Reviews of centers.

(a) *Overview.* Each Center will be reviewed at least annually, and at the end of its third year of operation according to the procedures and criteria set out below. There will be regular management interaction with NIST and the other Centers for the purpose of evaluation and program shaping. Centers are encouraged to try new approaches, must evaluate their effectiveness, and abandon or adjust those which do not have the desired impact.

(b) *Annual reviews of centers.* Centers will be reviewed annually as part of the funding renewal process using the criteria set out in § 290.8(d). The funding level at which a Center is renewed is contingent upon a positive program evaluation and will depend upon the availability of federal funds and on the Center's ability to obtain suitable match, as well as on the budgetary requirements of its proposed program. Centers must continue to demonstrate that they will be self-supporting after six years.

(c) *Third year review of centers.* Each host receiving a Center Operating Award under these procedures shall be evaluated during its third year of operation by a Merit Review Panel appointed by the Secretary of Commerce. Each such Merit Review Panel shall be composed of private experts, none of whom shall be connected with the involved Center, and Federal officials. An official of NIST shall chair the panel. Each Merit Review Panel shall measure the involved Center's performance against the criteria set out in § 290.8(d). The Secretary shall not provide funding for the fourth through the sixth years of such Center's operation unless the evaluation is positive on all

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grounds. As a condition of receiving continuing funding, the Center must show evidence at the third year review that they are making substantial progress toward self-sufficiency. If the evaluation is positive and funds are available, the Secretary of Commerce may provide continued funding through the sixth year at declining levels, which are designed to insure that the Center no longer needs financial support from NIST by the seventh year. In no event shall funding for a Center be provided by the NIST Manufacturing Technology Centers Program after the sixth year of support.

(d) *Criteria for annual and third year reviews.* Centers will be evaluated under the following criteria in each of the annual reviews, as well as the third year review:

(1) The program objectives specified in § 290.3(b) of these procedures;

(2) Funds-matching performance;

(3) The extent to which the target firms have successfully implemented recently developed or currently developed advanced manufacturing technology and techniques transferred by the Center;

(4) The extent to which successes are properly documented and there has been further leveraging or use of a particular advanced manufacturing technology or process;

(5) The degree to which there is successful operation of a network, or technology delivery mechanism, involving the sharing or dissemination of information related to manufacturing technologies among industry, universities, nonprofit economic development organizations and state governments.

(6) The extent to which the Center can increasingly develop continuing resources—both technological and financial—such that the Centers are finally financially self-sufficient.

§ 290.9 Intellectual property rights.

(a) Awards under the Program will follow the policies and procedures on ownership to inventions made under grants and cooperative agreements that are set out in Public Law 96-517 (35 U.S.C. chapter 18), the Presidential Memorandum on Government Patent Policy to the Heads of Executive Departments and Agencies Dated Feb-

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ruary 18, 1983, and part 401 of title 37 of the Code of Federal Regulations, as appropriate. These policies and procedures generally require the Government to grant to Centers selected for funding the right to elect to obtain title to any invention made in the course of the conduct of research under an award, subject to the reservation of a Government license.

(b) Except as otherwise specifically provided for in an Award, Centers selected for funding under the Program may establish claim to copyright subsisting in any data first produced in the performance of the award. When claim is made to copyright, the funding recipient shall affix the applicable copyright notice of 17 U.S.C. 401 or 402 and acknowledgment of Government sponsorship to the data when and if the data are delivered to the Government, are published, or are deposited for registration as a published work in the U.S. Copyright Office. For data other than computer software, the funding recipient shall grant to the Government, and others acting on its behalf, a paid up, nonexclusive, irrevocable, worldwide license for all such data to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government. For computer software, the funding recipient shall grant to the Government, and others acting on its behalf, a paid up, nonexclusive, irrevocable, worldwide license for all such computer software to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the Government.

PART 291—MANUFACTURING EXTENSION PARTNERSHIP; ENVIRONMENTAL PROJECTS

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